



## Client Southend University Hospital NHS Foundation

**Nature of client end user business:** NHS

**Project Location:** Southend, Essex

### Scope of job

Replacement of 5 air handling units and associated services that supply the hospital Eye Clinic, Theatre 8, Pathology, Minor Op's and Mortuary. The new air handling units needed to be energy efficient and include meters to monitor efficiency. All works had to be carried out in the occupied building which required close liaison with staff and contractors and the need to keep noise and disruptions to a minimum.

**Timing:** Work completed April 2015

### What the project entailed

The project began by isolating and crane lifting the existing plant from the roof of the building. New base frames and structural supports were added to the building fabric before lifting the new 1500kg units into place. Each unit is fully weatherproofed and treated for salt atmosphere and each has intake and exhaust louvres.

Following installation of the AHU units we installed new Mitsubishi Electric condensing units and new ductwork was installed and connected to the new plant with any existing ductwork being cleaned and sterilised. The pipework for the low pressure hot water had to be modified to serve the new units, including heat meters to monitor energy consumption.

New sub main, distribution boards and power circuits were then installed and the entire system was modified to interface with the existing building management system, along with modification of the controls to suit the new air handling requirements.

### What we brought to the job

Adcock have enjoyed a long and successful relationship with Southend Hospital and we have acquired a thorough working knowledge of the building services.

The new air handling units will provide the hospital with a long term, energy efficient flow of clean, fresh air that will provide a short term payback and long term savings.

### Equipment installed

5 HTM-03-01 Compliant AirCRAFT AHU's, waterproofed complete with intake and exhaust louvres and weather roof.

10 Mitsubishi Electric condensing units

### Works included

Isolation and removal of existing plant currently serving the areas

Supply and installation of new ductwork to connect new plant

Modification and updating of controls to suit new air handling requirements

Modifications to existing LPHW pipework to serve new air handling plant including heat meters to monitor energy consumption

Supply and installation of new sub main, distribution boards and power distribution circuits

Modifications and interfacing with the sites BMS system

Modifications to the fire alarm circuits to interface with the AHU

Supply and installation of emergency lighting

Builders work in connection with the installations including a plant room enclosure for Theatre 8, base frames, structural supports and modifications to building fabric for mechanical access

Cleaning of existing ductwork throughout the areas served

Crane lifting of equipment

Validations, testing and commissioning.

The energy efficient units require no maintenance as they a recuperator which is 60% efficient with a summer bypass for free cooling, making it highly cost efficient.